

## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 9-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4-23-08. Examiner notes that claims 9-20 were mistakenly indicated as group II in the election/restriction requirement, however upon review of the application, the claim set includes claims 1-8 as group I and claims 9-18 as group II.

Applicant's election without traverse of claims 1-8 in the reply filed on 4-23-08 is acknowledged.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for cellulose having OH functional groups, does not reasonably provide enablement for cellulose and/or natural fibres having OH functional groups. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Examiner is unable to locate in the specification any examples of natural fibres having OH functional groups. Examiner respectfully submits that because the limitation "natural fibres" encompasses such a large genus of

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materials, it is unclear as to which natural fibres having OH functional groups would provide for enablement for the claimed support of claims 1 and 4 . Claims 2 and 3 depend on claim 1 and hence are also rejected. Claims 5-8 depend on claim 4 and hence are also rejected.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 provides for the use of a floating support, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966). Claims 2 and 3 depend on claim 1 and hence are also rejected.

Regarding claim 4, the phrase "in particular" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 6 recites the broad recitation between 90 and 98% of north resinous fibres, and the claim also recites advantageously 95% which is the narrower statement of the range/limitation. In the present instance, claim 6 recites the broad recitation between 1 and 4% of carbon black, and the claim also recites advantageously 3% which is the narrower statement of the range/limitation. In the present instance, claim 6 recites the broad recitation between 1 and 3% of epichlorohydrin resin, and the claim also recites advantageously 2% which

is the narrower statement of the range/limitation. Claims 5-8 depend on claim 4 and hence are also rejected.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Teng et al(3915855).

Teng et al teaches a floating support based on cellulose and/or natural fibres, of which all or some of the OH functional groups have reacted with a grafting agent RX(column 1 lines 24-68), where R is a suitable hydrophobic group in order to be able to be in the liquid state at a temperature of at least 200 degrees C at atmospheric pressure and in order to be able to react on the OH functional groups at least under certain reaction conditions, while producing covalent grafting of hydrophobic groups R onto the OH functional groups with formation of a volatile compound HX under the reaction conditions. Teng et al further teaches wherein RX is a fatty acid halide(lauroyl chloride; column 1 line 67). Teng et al further teaches wherein the RX is a saturated or unsaturated aliphatic fatty acid halide comprising at least 16 carbon atoms(column 2 lines 27-29).

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Japanese reference(JP 54-60384)).

Japanese reference teaches a floating support based on cellulose and/or natural fibres, of which all or some of the OH functional groups have reacted with a grafting agent RX(abstract), where R is a suitable hydrophobic group in order to be able to be in the liquid state at a temperature of at least 200 degrees C at atmospheric pressure and in order to be able to react on the OH functional groups at least under certain reaction conditions, while producing covalent grafting of hydrophobic groups R onto the OH functional groups with formation of a volatile compound HX under the reaction conditions. Japanese reference further teaches wherein RX is a fatty acid halide(palmitoyl halide). Japanese reference further teaches wherein the RX is a saturated or unsaturated aliphatic fatty acid halide comprising at least 16 carbon atoms(abstract).

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Gordon(4107426).

Gordon teaches a floating support based on cellulose and/or natural fibres, of which all or some of the OH functional groups have reacted with a grafting agent RX(Example 1, column 13 lines 23-56), where R is a suitable hydrophobic group in order to be able to be in the liquid state at a temperature of at least 200 degrees C at atmospheric pressure and in order to be able to react on the OH functional groups at least under certain reaction conditions, while producing covalent grafting of hydrophobic groups R onto the OH functional groups with formation of a volatile compound HX under

the reaction conditions. Gordon further teaches wherein RX is a fatty acid halide(column 13 lines 27-32). Gordon further teaches wherein the RX is a saturated or unsaturated aliphatic fatty acid halide comprising at least 16 carbon atoms.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4,7,8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teng et al(3915855) taken together with Japanese reference(53-61582).

Teng et al teaches a medium for the treatment of aerobic lagoons(column 1 lines 51-52 noting treatment of surfaces of large bodies of water) existing in the form of a support based on cellulose and/or natural fibres, of which all or some of the OH functional groups have reacted with a grafting agent RX(column 1 lines 24-68), where R is a suitable hydrophobic group in order to be able to be in the liquid state at a temperature of at least 200 degrees C at atmospheric pressure and in order to be able to react on the OH functional groups at least under certain reaction conditions, while producing covalent grafting of hydrophobic groups R onto the OH functional groups with formation of a volatile compound HX under the reaction conditions. Teng et al is silent as to the medium being characterized in that it additionally contains carbon black.

Japanese reference teaches a structure for treatment of water including a fibrous support sheet, wherein the fibrous sheet is admixed with activated carbon. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide active carbon(carbon black) to the cellulose medium of Teng et al to provide for treatment of certain substances which are readily adsorbable onto carbon black.

Teng et al further teaches wherein the grafting agent is a fatty acid halide. Teng et al further teaches wherein the fatty acid is behenic acid.

***Allowable Subject Matter***

Claims 5,6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 5 recites "characterized in that the support additionally contains epichlorohydrin resin". Teng et al teaches a support but does not teach wherein the support additionally contains epichlorohydrin resin. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a support which additionally contains epichlorohydrin resin because Teng et al does not suggest such a modification.

Claim 6 recites "between 1 and 3% of epichlorohydrin resin". Teng et al teaches a support but does not teach wherein the support additionally contains epichlorohydrin resin. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a support which additionally contains between 1 and 3% of epichlorohydrin resin because Teng et al does not suggest such a modification.





Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, every Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rah  
June 4, 2008

/Robert A Hopkins/  
Primary Examiner, Art Unit 1797